

GARRETT J. TIRPAK CFM

FLOOD MITIGATION CONSULTANT

TIRPAK AGENCY

PO BOX 699

SILVERHILL, ALABAMA 36576

251-945-5570

garrett.tirpak@gmail.com



How Flood Vents and Mitigation Efforts Can Lower Flood Premiums



Mitigation

- Flood Loss Control Solutions
 - Eliminating Sub Grade Spaces
 - Raising Mechanicals
 - **Proper Flood Vents**

About Us

- 13 years of promoting sound floodplain management
- Over 250,000 flood vents in the field
- Made in the USA
- **Flood Risk Assessment**
- **System/Team**
 - a. **Retailers**
 - b. **Installers**
 - c. **Insurance Agents**
 - d. **Surveyors**
 - e. **Other professionals?**

Changing Landscape

- Biggert Waters Reform (Pre Firm)
 - Actuarial Rates Phased in
 - Non-Primary Residences
 - Severe Repetitive Loss
 - Business Properties



25%

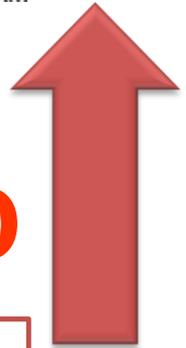


Changing Landscape

- 2012 Biggert - Waters Reform
- 2014 Grimm – Waters (HFIAA)
- Actuarial Rates Phased in
 - Non-Primary Residences
 - Severe Repetitive Loss
 - Business Properties



18-25%



\$25 Surcharge Primary
\$250 Non-Primary

FEMA Recommends



FEMA

Biggert Waters Flood Insurance Reform Act of 2012

Impact of National Flood Insurance Program (NFIP) Changes

Note: This Fact Sheet deals specifically with Sections 205 and 207 of the Act.

In 2012, the U.S. Congress passed the Biggert Waters Flood Insurance Reform Act of 2012 which calls on the Federal Emergency Management Agency (FEMA) and other agencies to make a number of changes to the way the NFIP is run. Some of these changes have already been put in place, and others will be implemented in the coming months. Key provisions of the legislation will require the NFIP to raise rates to reflect true flood risk, make the program more financially stable, and change how Flood Insurance Rate Map (FIRM) updates impact policyholders. The changes will mean premium rate increases for some – but not all – policyholders over time.

Background:

In 1968, Congress created the National Flood Insurance Program (NFIP). Since most homeowners' insurance policies did not cover flood, property owners who experienced a flood often found themselves financially devastated and unable to rebuild. The NFIP was formed to fill that gap and was designed to incorporate community adoption of minimum standards for new construction and development to minimize future risk of flood damage. Pre-existing homes and businesses, however, were not required to meet these standards. These older properties were eligible to obtain insurance at rates that did not reflect their true flood risk.

In addition, as the initial flood risk identified by the NFIP had been built in compliance with existing standards had been revised. This "Grandfathering" approach prevented flood risk in their area increased.

After 45 years, flood risks continue and the costs and complexity of the program have increased. In 2012, Congress passed legislation to make the NFIP more sustainable.

What this means:

The new law eliminates some artificially low rates and subsidies. Insurance rates will now move to reflect full risk, and flood insurance will be more financially stable.

Actions such as buying a property, allowing a policy to lapse, or making changes to your insurance policy. There are investments you can make to reduce your risk and your costs. And FEMA can help communities lower flood risk.

What is Changing Now?

Most rates for most properties will more accurately reflect true risk. Subsidized rates for older residences are being phased out now. There are several actions which can trigger a rate change, and not everyone will be affected. It's important to know the distinctions and actions to avoid, or to take, to lessen the impacts.

March 2013

1

What Can Be Done to Lower Costs?

For home owners and business owners:

- Talk to your insurance agent about your insurance options.
- You will probably need an Elevation Certificate to determine your correct rate.
- Higher deductibles might lower your premium.
- Consider incorporating flood mitigation into your remodeling or rebuilding.
 - Building or rebuilding higher will lower your risk and could reduce your premium.
 - Consider adding vents to your foundation or using breakaway walls.
- Talk with local officials about community-wide mitigation steps.



WOW Savings



83%

ROI: 2 Years

High premium

Premium Calculations

<u>COVERAGE</u>	<u>DEDUCT</u>	<u>INS. AMT.</u>	<u>RATES</u>	<u>PREMIUM</u>	<u>DISCOUNT/ BUYBACK</u>	<u>NET PREMIUM</u>
Building	1000	60,000	2.460	1,476		
Added		190,000	1.130	<u>2,147</u>		
Building Totals:		250,000		3,623	0	3,623.00
Contents	1000	25,000	.850	213		
Added		75,000	.190	<u>143</u>		
Contents Totals:		100,000		356	0	356.00
<u>Total Building and Contents:</u>				3,979	0	3,979.00

Policy Term:	1	
Expense Constant:		0
ICC Premium:		24.00
Community Discount:		.00
Community Probation Charge:		0
Annual Premium:		4,003.00
Policy Service Fee:		40
Total Annual Due:		<u>4,043.00</u>



87% Reduction

COVERAGE FOR	BASIC LIMITS			ADDITIONAL LIMITS			DEDUCTIBLE AMOUNT	PREMIUM CALCULATIONS		
	AMOUNT	RATE	PREMIUM	AMOUNT	RATE	PREMIUM		DEDUCTIBLE DECREASE	TOTAL AMOUNT	TOTAL ANNUAL PREMIUM
Building	\$60,000	0.25	\$150	\$190,000	0.08	\$152	\$1,000	\$0	\$250,000	\$302
Contents	\$25,000	0.38	\$95	\$75,000	0.12	\$90	\$1,000	\$0	\$100,000	\$185

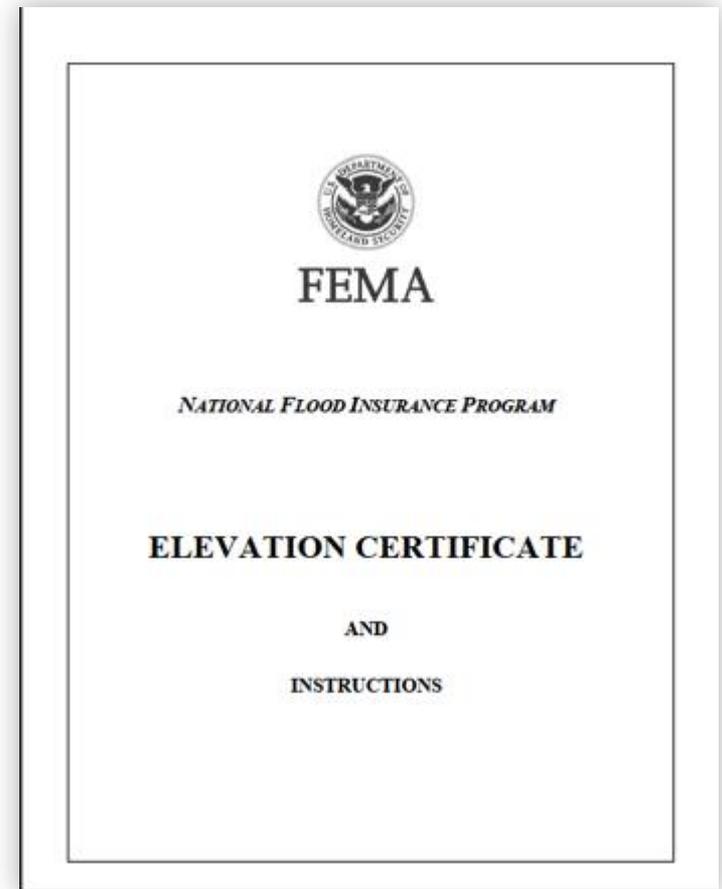
DEDUCTIBLE OPTIONS		
BUILDING	CONTENTS	PREMIUM
\$1,000	\$1,000	\$506
\$2,000	\$2,000	\$471
\$3,000	\$3,000	\$437
\$4,000	\$4,000	\$402
\$5,000	\$5,000	\$391

Annual Subtotal:	\$487
ICC Premium:	\$4
Sub Total:	\$491
CRS Discount: 5%	\$25
Policy Fee:	\$40
Probation Surcharge:	\$0
Total Premium:	\$506

Breaking It Down

FEMA Elevation Certificate

- Last check point before CO is granted
- Surveyor Completes
- Sections A8 & A9 Flood Vent Info
- Know your diagrams



ELEVATION CERTIFICATE

Important: Read the instructions on pages 1-9.

OMB No. 1660-0008
Expiration Date: July 31, 2015

SECTION A - PROPERTY INFORMATION

FOR INSURANCE COMPANY USE

A1. Building Owner's Name Gary K. & Linda A. Liebowitz

Policy Number:

A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.
[REDACTED]

Company NAIC Number:

A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.)
Lot 15, Block 288

A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.) Residential

A5. Latitude/Longitude: Lat. 40.0697 Long. -74.0611 Horizontal Datum: NAD 1927 NAD 1983

A6. Attach at least 2 photographs of the building if the Certificate is being used to obtain flood insurance.

A7. Building Diagram Number 9

A8. For a building with a crawlspace or enclosure(s):

- a) Square footage of crawlspace or enclosure(s) 1,210 sq ft
b) Number of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade 0
c) Total net area of flood openings in A8.b 0 sq in
d) Engineered flood openings? Yes No

A9. For a building with an attached garage:

- a) Square footage of attached garage N/A sq ft
b) Number of permanent flood openings in the attached garage within 1.0 foot above adjacent grade
c) Total net area of flood openings in A9.b sq in
d) Engineered flood openings? Yes No

SECTION B - FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

B1. NFIP Community Name & Community Number
Borough of Point Pleasant 345313

B2. County Name
Ocean

B3. State
NJ

B4. Map/Panel Number
34029C0208/0208

B5. Suffix
F

B6. FIRM Index Date
09/29/06

B7. FIRM Panel Effective/Revised Date
09/29/06

B8. Flood Zone(s)
AE

B9. Base Flood Elevation(s) (Zone AO, use base flood depth)
5

B10. Indicate the source of the Base Flood Elevation (BFE) data or base flood depth entered in Item B9.

FIS Profile FIRM Community Determined Other/Source: _____

B11. Indicate elevation datum used for BFE in Item B9: NGVD 1929 NAVD 1988 Other/Source: _____

B12. Is the building located in a Coastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA)? Yes No
Designation Date: _____ CBRS OPA

SECTION C – BUILDING ELEVATION INFORMATION (SURVEY REQUIRED)

C1. Building elevations are based on: Construction Drawings* Building Under Construction* Finished Construction

*A new Elevation Certificate will be required when construction of the building is complete.

C2. Elevations – Zones A1–A30, AE, AH, A (with BFE), VE, V1–V30, V (with BFE), AR, AR/A, AR/AE, AR/A1–A30, AR/AH, AR/AO. Complete items C2.a–h below according to the building diagram specified in Item A7. In Puerto Rico only, enter meters.

Benchmark Utilized: _____

Vertical Datum: _____

Indicate elevation datum used for the elevations in items a) through h) below. NGVD 1929 NAVD 1988 Other/Source: _____

Datum used for building elevations must be the same as that used for the BFE.

Check the measurement used.

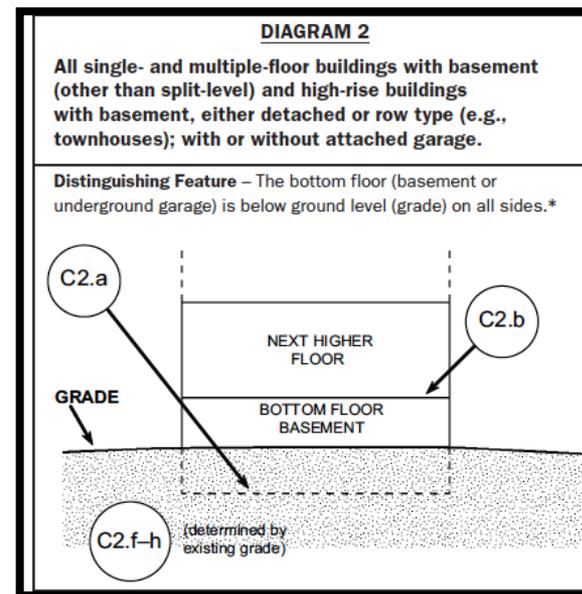
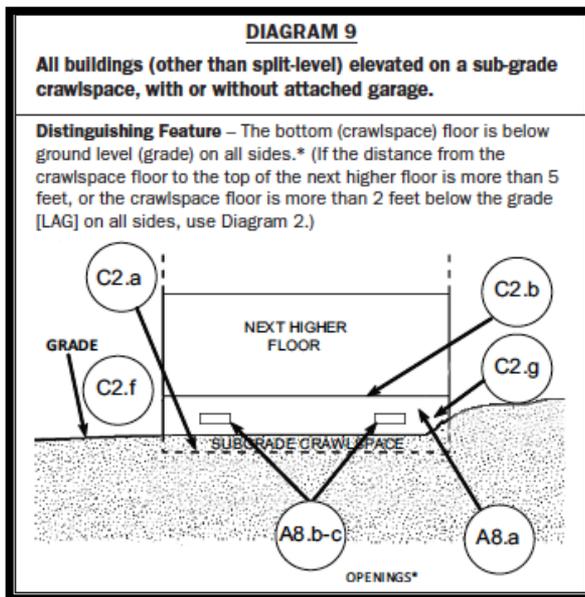
- | | | |
|---|------------|--|
| a) Top of bottom floor (including basement, crawlspace, or enclosure floor) | <u>3.4</u> | <input checked="" type="checkbox"/> feet <input type="checkbox"/> meters |
| b) Top of the next higher floor | <u>8.4</u> | <input checked="" type="checkbox"/> feet <input type="checkbox"/> meters |
| c) Bottom of the lowest horizontal structural member (V Zones only) | <u>N/A</u> | <input checked="" type="checkbox"/> feet <input type="checkbox"/> meters |
| d) Attached garage (top of slab) | <u>N/A</u> | <input checked="" type="checkbox"/> feet <input type="checkbox"/> meters |
| e) Lowest elevation of machinery or equipment servicing the building
(Describe type of equipment and location in Comments) | <u>5.7</u> | <input checked="" type="checkbox"/> feet <input type="checkbox"/> meters |
| f) Lowest adjacent (finished) grade next to building (LAG) | <u>5.5</u> | <input checked="" type="checkbox"/> feet <input type="checkbox"/> meters |
| g) Highest adjacent (finished) grade next to building (HAG) | <u>6.3</u> | <input checked="" type="checkbox"/> feet <input type="checkbox"/> meters |
| h) Lowest adjacent grade at lowest elevation of deck or stairs, including structural support | <u>6.0</u> | <input checked="" type="checkbox"/> feet <input type="checkbox"/> meters |

Non-Compliance Red Flags

1st Sub Grade Space

Diagram 9: lowest rated floor is 3.4 equals -2 through NFIP

Solution: Excavate soil from one wall to bring the LAG down 2.1 feet, or fill



Lowest floor C2.a

A Zones

DIAGRAM 7

All buildings elevated on full-story foundation walls with a partially or fully enclosed area below the elevated floor. This includes walkout levels, where at least 1 side is at or above grade. The principal use of this building is located in the elevated floors of the building.

Distinguishing Feature – For all zones, the area below the elevated floor is enclosed, either partially or fully. In A Zones, the partially or fully enclosed area below the elevated floor is with or without openings** present in the walls of the enclosure. Indicate information about enclosure size and openings in Section A – Property Information.

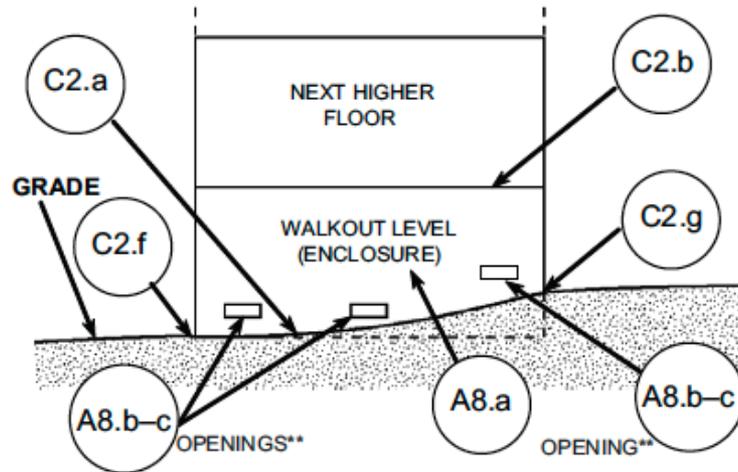
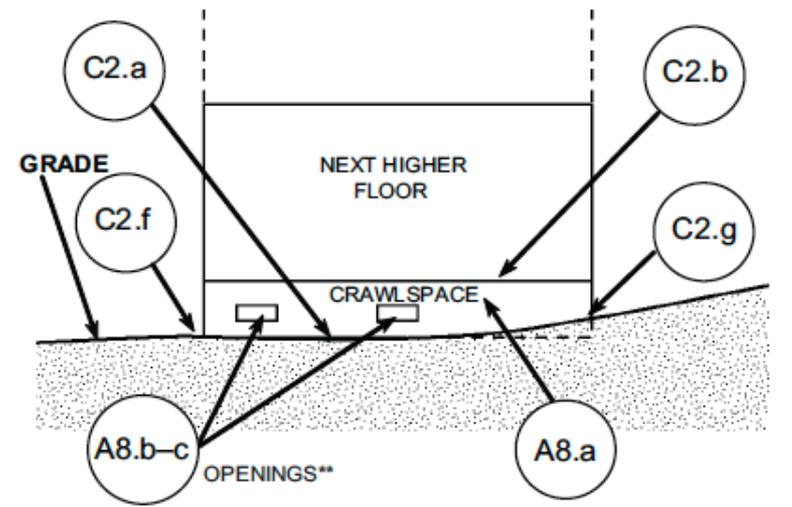


DIAGRAM 8

All buildings elevated on a crawlspace with the floor of the crawlspace at or above grade on at least 1 side, with or without an attached garage.

Distinguishing Feature – For all zones, the area below the first floor is enclosed by solid or partial perimeter walls. In all A zones, the crawlspace is with or without openings** present in the walls of the crawlspace. Indicate information about crawlspace size and openings in Section A – Property Information.



Lowest Floor C2.b

Flood Vent Compliance

2nd Red Flag

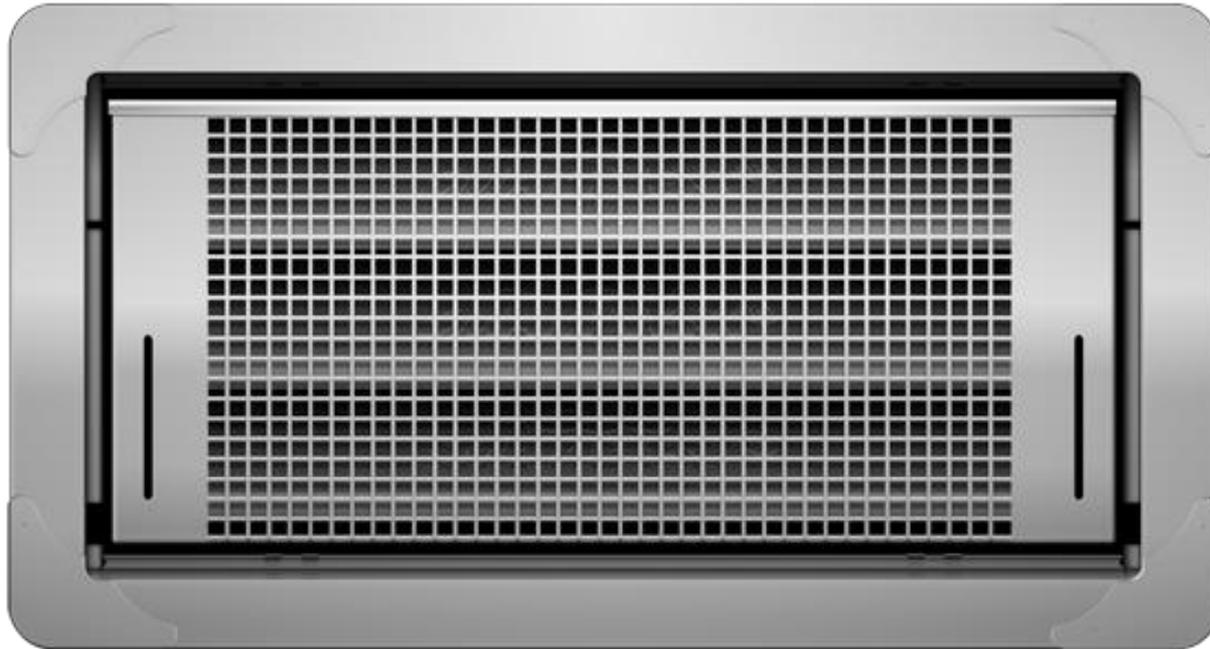
- EC showed 1,210 sq.ft crawlspace
- “0” flood vent coverage
- Lowest floor rating 3.4 feet not 8.4 feet

A8. For a building with a crawlspace or enclosure(s):

a) Square footage of crawlspace or enclosure(s)	<u>1,210</u>	sq ft
b) Number of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade	<u>0</u>	
c) Total net area of flood openings in A8.b	<u>0</u>	sq in
d) Engineered flood openings?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

Flood Vent Solution

- Install (7) 1540-510 model Smart Vents



Outcome

- Total Cost for Retrofit: \$4,000
- Reduced Premium by 87% \$4,043 - \$506
- \$3,537 in savings
- ROI: 14 months

What is a Flood Vent?

- During a flood event, immense hydrostatic forces are in action.
- Flood ventilation operates under the principle of relieving (*rather than resisting*) that pressure.
- Relief is required by code, insurance companies, and the principles of good floodplain management.

TB 1



Openings in Foundation Walls and Walls of Enclosures

Below Elevated Buildings in Special Flood Hazard Areas
in accordance with the National Flood Insurance Program

Technical Bulletin 1 / August 2008

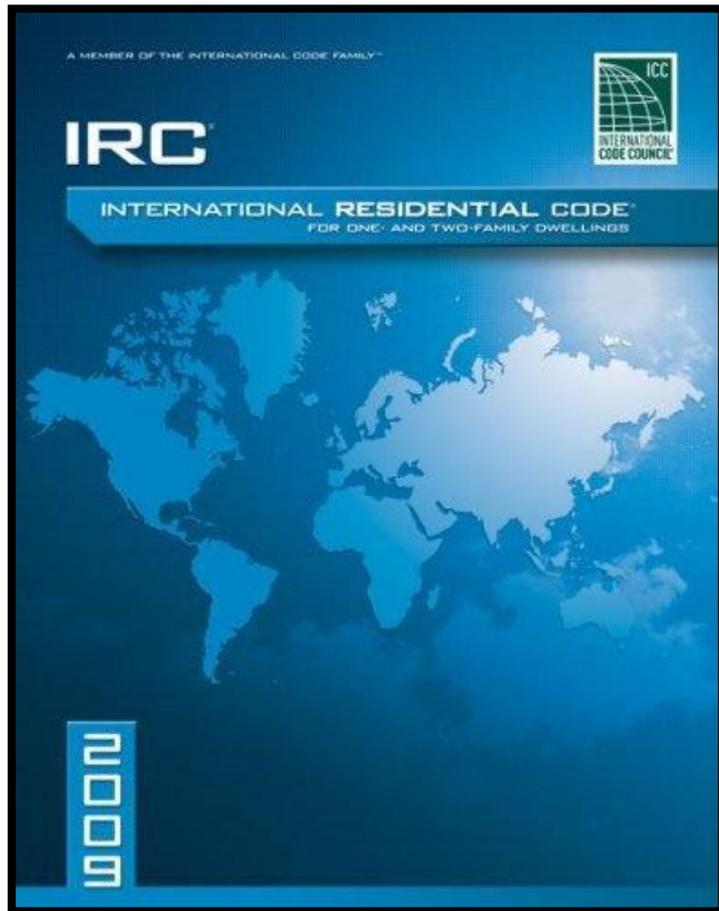


FEMA

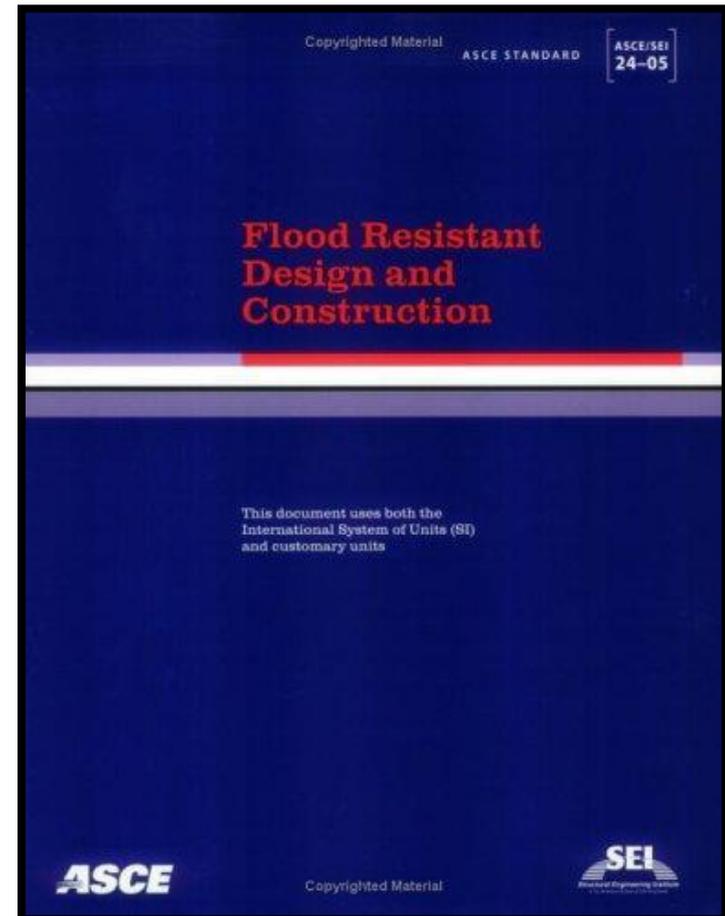

SMART VENT[®]
Foundation Flood Vents

Flood Vent Codes

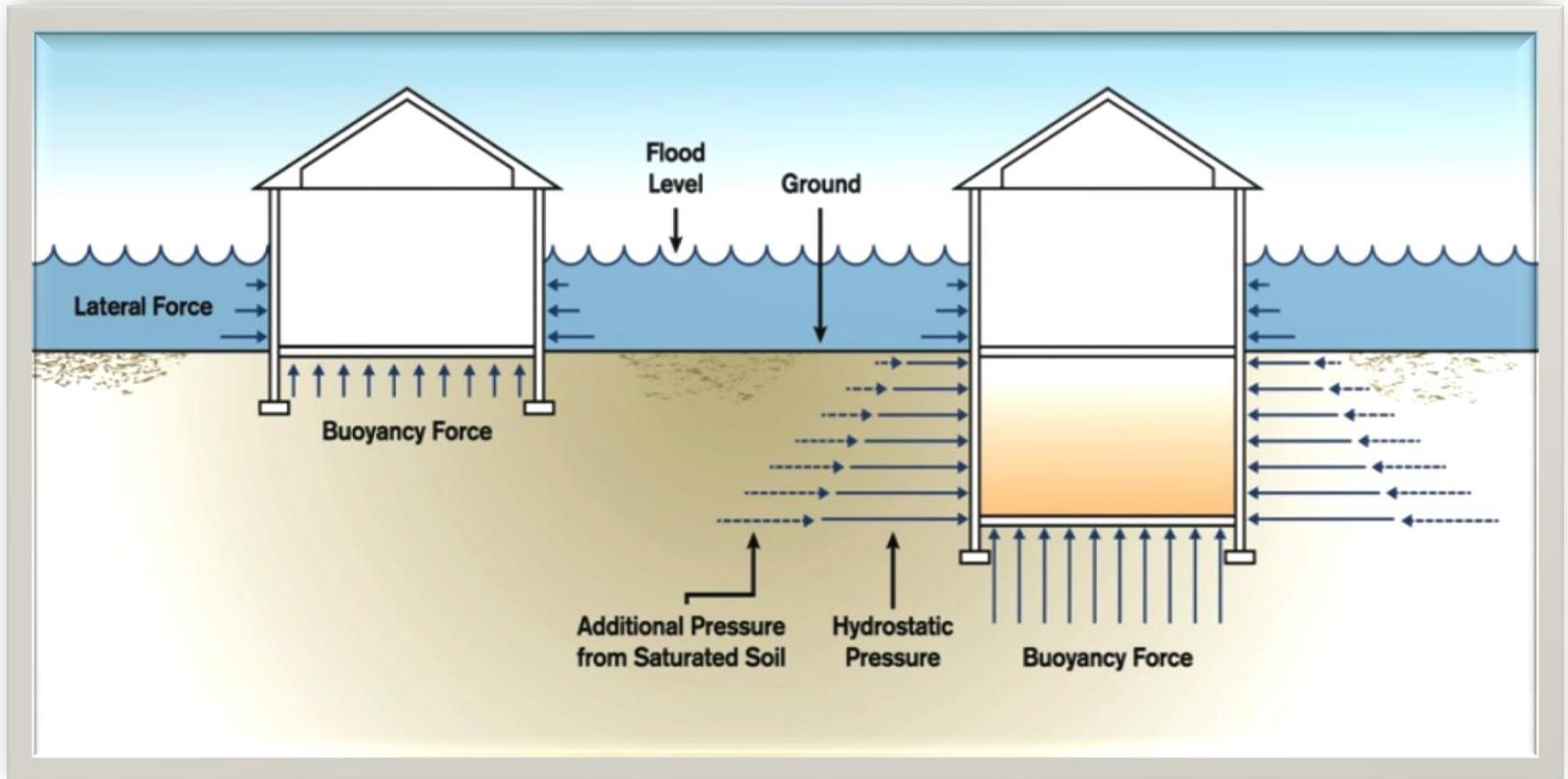
IRC & IBC



ASCE 24-05



Hydrostatic Pressure



The Effects of Hydrostatic Force



Crawlspaces



Full Height Enclosures



Full Height Enclosures (townhouse)



Attached Garages



BFE

BFE

Detached Accessory



Flood Vents Installed

Unacceptable Measures: Non-Engineered Openings



Must be Broken to Comply



If it has a cover its not compliant



Air Vents that open and close with temperature



Garage Doors & Entry Doors

Debris Blockage



Engineered Openings

- Designed, Tested, & Certified for performance (“engineered”)
- No need to measure
- Designed and certified based on computations (TB1 and ASCE 24)
- ICC-ES: AC-364 (AFFV)
- I-Codes & ASCE 24: 3” min dimension

What is SMART VENT?

- SMART VENT is an ICC-ES certified & FEMA accepted foundation flood vent.



ICC-ES Report



ICC EVALUATION SERVICE

ICC-ES Evaluation Report

www.icc-es.org | (800) 423-6587 | (562) 699-1000

DIVISION: 08 00 00—OPENINGS
Section: 08 35 00—Vents

REPORT HOLDER:

SMARTVENT PRODUCTS, INC.
450 ANDRO DRIVE, SUITE 2B
PITMAN, NEW JERSEY 08071
(856) 307-1468
www.smartvent.com
eval@smartvent.com

EVALUATION SUBJECT:

SMART VENT® AUTOMATIC FLOODVENT™ MODEL #1540-510; SMARTVENT™ STACKING MODEL #1540-511; SMARTVENT™ WOOD WALL FLOOD MOD #1540-512; SMARTVENT™ FLOOD OVERHEAD DI #1540-513; SMARTVENT™ OVERHEAD FLOODVENT™ OVERHEAD DI #1540-514; SMARTVENT™ OVERHEAD FLOODVENT™ OVERHEAD DI #1540-515

1.0 EVALUATION SCOPE

Compliance with the following:

- 2009 and 2006 International Building Code (IBC)
- 2009 and 2006 International Residential Code (IRC)

Properties evaluated:

- Physical operation
- Water flow

2.0 USES

The Smart Vent® units are automatic flood vents (AFFVs) employed to equalize hydrostatic pressure on nonfire-resistance-rated foundation walls, overhead doors and building walls subjected to falling flood waters. The Smart Vent® units are used in areas where flood hazard areas have been established in accordance with IBC Section 1612.3 or IRC Section R3222.1. Certain models also allow natural ventilation in accordance with Section 1203 of the IBC or Section 403 of the IRC.

3.0 DESCRIPTION

3.1 General:

When subjected to pressure from rising water, the Smart Vent® AFFVs disengage, then pivot open to allow flow in either direction to equalize water level and hydrostatic pressure from one side of the foundation to the other. The Smart Vent® units are installed in accordance with the construction requirements of the IBC and IRC. The units must be installed in accordance with the manufacturer's instructions.

*Revised July 2011

ICC-ES Evaluation Reports are not to be construed as representing aesthetics or any other attributes not specifically addressed, nor are they to be construed as an endorsement of the subject of the report or a recommendation for its use. There is no warranty by ICC Evaluation Service, LLC, express or implied, as to any finding or other matter in this report or as to any product covered by the report.

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Smart VENT® INC. 1-877-441-8368
www.smartvent.com ESR 2074
Certified to cover 200sq/ft
Model # 1540-510
SN# S1023160 Made in the USA

REPORT HOLDER:

SMARTVENT PRODUCTS, INC.
450 ANDRO DRIVE, SUITE 2B
PITMAN, NEW JERSEY 08071
(856) 307-1468
www.smartvent.com
eval@smartvent.com

FLOOD VENTS:
SMARTVENT™ MODEL #1540-511;
SMARTVENT™ WOOD WALL FLOOD MOD #1540-512;
SMARTVENT™ FLOOD OVERHEAD DI #1540-513;
SMARTVENT™ OVERHEAD FLOODVENT™ OVERHEAD DI #1540-514;
SMARTVENT™ OVERHEAD FLOODVENT™ OVERHEAD DI #1540-515

different sides of the foundation wall. For every 200 square feet of area, except that the minimum number of model #1540-511 and model #1540-521 must be a maximum of one AFFV for every 400 square feet (37 m²) of enclosed area.

the base flood elevation.

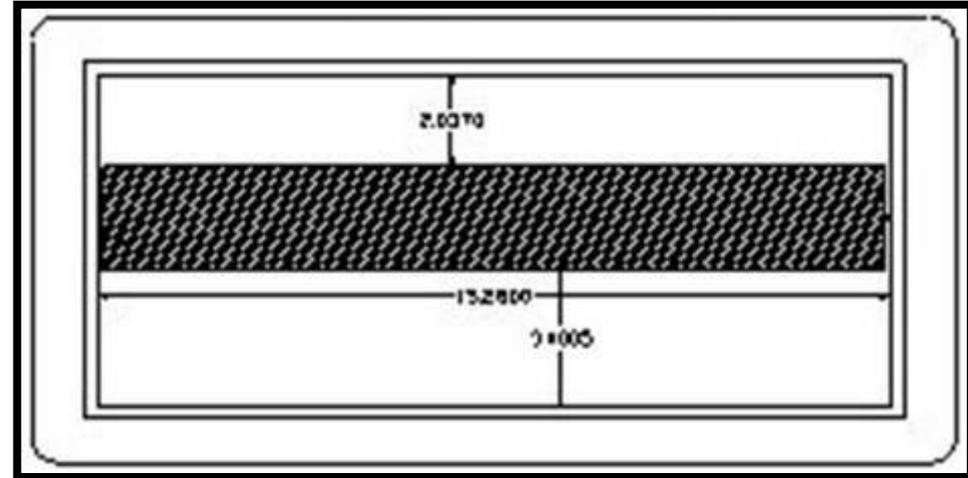
- With the bottom of the AFFV located a maximum of 12 inches (305.4 mm) above grade.



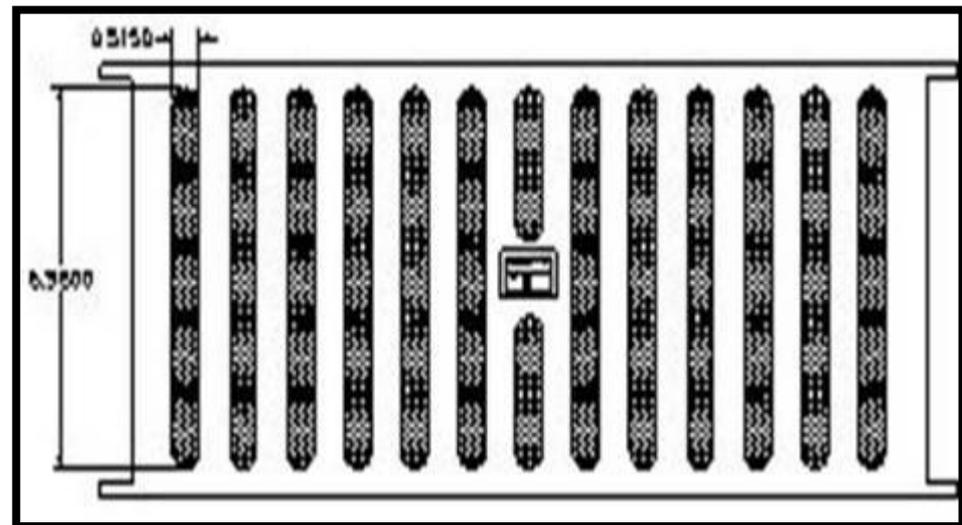


Engineered Flood Vent vs. a common non-engineered opening

Ex. of an engineered flood vent: has 200 sq. feet of rated flood protection.



Most commonly used non-engineered opening: has 40 sq. inches net, if opened and if the screen is removed.

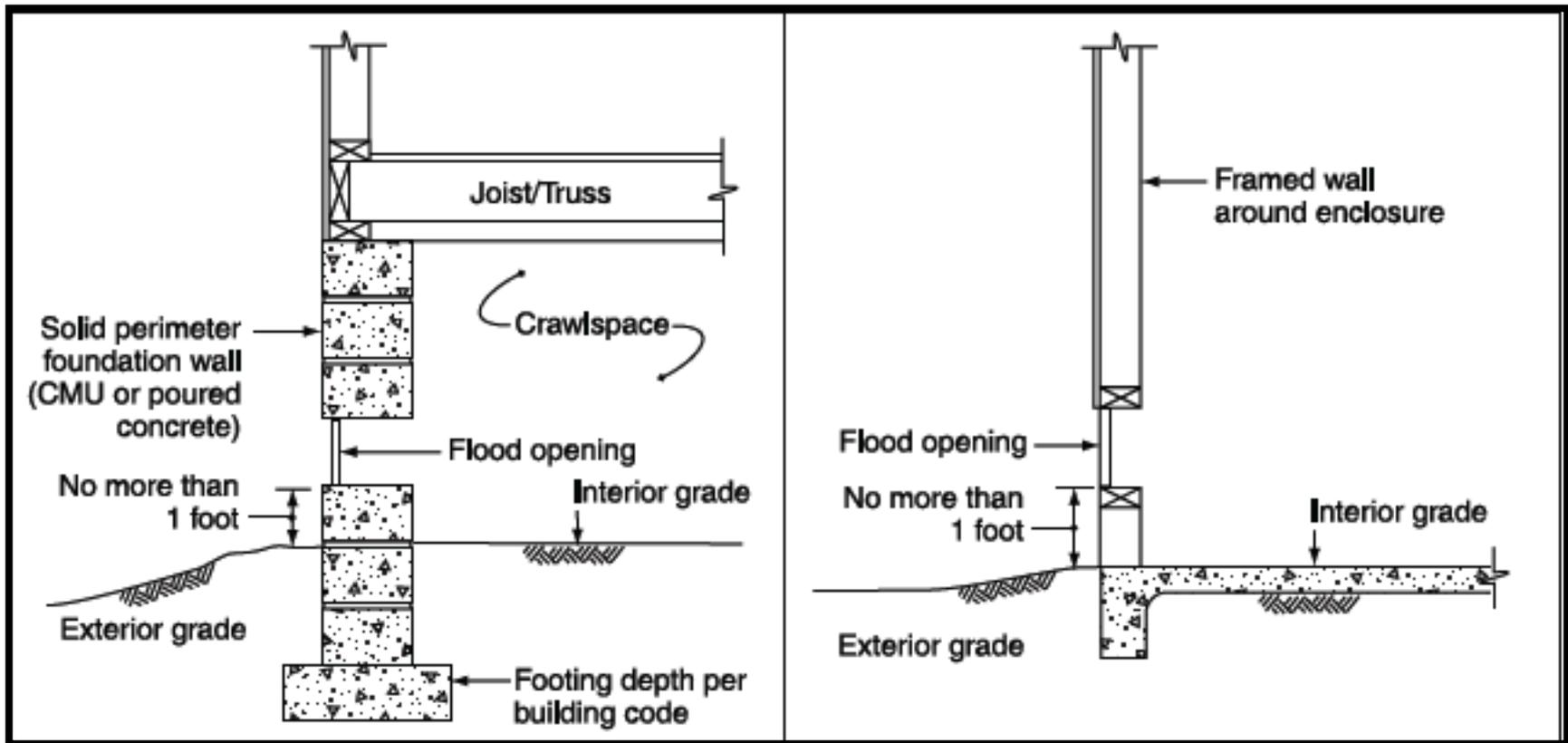


Do The Math

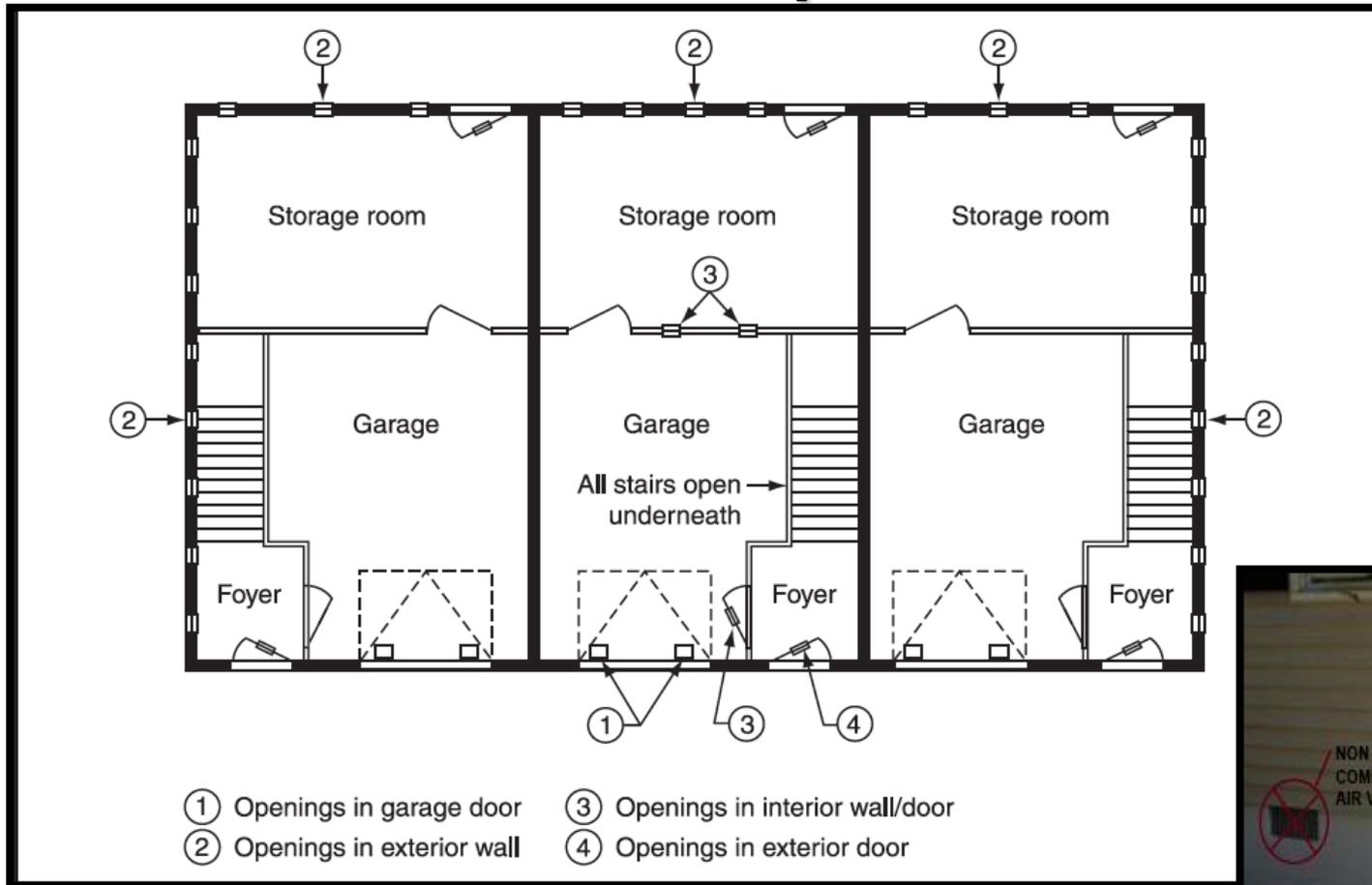
- 1,200 sq. foot crawlspace = (6) engineered
- $1200/40$ sq. inches = (30) non-engineered



Placement Requirements



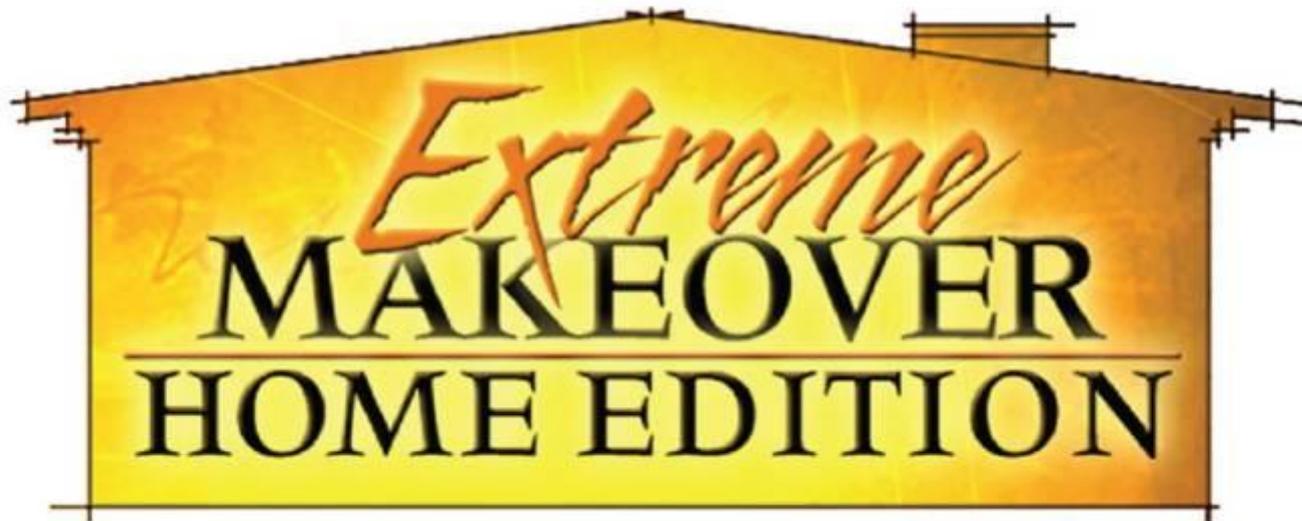
Placement Requirements



Case Studies

- **Case studies**

- ▶ New residence, post Katrina, LA
- ▶ New church, post Katrina, LA



Case Study 1

Project:

- Usea family home, Westwego, LA
- Requirements:
 - LEED® Platinum certification
 - Sealed crawl space

Case study — Usea family home



Case study — Usea family home



Specifying Foundation Flood Vents for Building Sustainability, Durability and Performance

Case study — Usea family home



Specifying Foundation Flood Vents for Building Sustainability, Durability and Performance

Case study — Usea family home

LEED Platinum certification

- Home energy rating system
 - 45% better than conventional new home
 - Sealed insulated crawl space

LEED® Facts

Extreme Makeover: Home Edition
Westwego, Louisiana

LEED for Homes
Certification awarded April 23, 2008

Platinum	88.5*
Sustainable Sites	17/22
Location & Linkages	10/10
Water Efficiency	8/15
Energy & Atmosphere	24/38
Materials & Resources	8/16
Indoor Environmental Quality	14/21
Innovation & Design	5.5/11
Awareness & Education	2/3

**Out of a possible 136 points*

Case study — Usea family home

Sealed insulated crawl space

- NFIP requirements in a floodplain
 - 14 engineered insulated flood vents were installed.
An insulated flood vent was the only option to maintain the sealed crawl space design.



For more information visit us online
CleanSpace
Closed Space Encapsulation System™
Available in Pennsylvania, Virginia, North Carolina & Florida
80% Energy Savings for duct work energy leakage
For more information please call
800-763-4815
www.cleanspace.com © 2002



Case study — Usea family home

House "A" Residential		
Square ft. enclosed area	2620	
\$ Structure coverage	\$250,000.00	
\$ Contents Coverage	\$100,000.00	
	Annual Flood Insurance Premiums	% reduction as first floor goes up
Annual Flood Insurance Premiums		
No Vents 1st flr 4' below BFE	\$12,415.00	
No Vents 1st flr 3' below BFE	\$8,472.00	32%
No Vents 1st flr 2' below BFE	\$6,708.00	21%
No Vents 1st flr 1' below BFE	\$4,849.00	28%
With Vents 1st flr @ BFE	\$1,195.00	75%
With Vents 1st flr 1' ABOVE BFE	\$400.00	67%
		97%

% decrease in premium worst case to best





711



ELEVATION CERTIFICATE

OMB No. 1660-0008
Expires February 28, 2009

08167

Important: Read the instructions on pages 1-8.

SECTION A - PROPERTY INFORMATION		For Insurance Company Use:
A1. Building Owner's Name	[REDACTED]	Policy Number
A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.	[REDACTED]	Company NAIC Number
City OCEAN CITY State NJ ZIP Code 08226		
A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.) [REDACTED]		
A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.) <u>RESIDENTIAL</u>		
A5. Latitude/Longitude: Lat. <u>N 39° 17' 35.24"</u> Long. <u>W 74° 33' 26.56"</u>		Horizontal Datum: <input checked="" type="checkbox"/> NAD 1927 <input type="checkbox"/> NAD 1983
A6. Attach at least 2 photographs of the building if the Certificate is being used to obtain flood insurance.		
A7. Building Diagram Number <u>8</u>		
A8. For a building with a crawl space or enclosure(s), provide		A9. For a building with an attached garage, provide:
a) Square footage of crawl space or enclosure(s)	<u>1,058</u> sq ft	a) Square footage of attached garage <u>495</u> sq ft
b) No. of permanent flood openings in the crawl space or enclosure(s) walls within 1.0 foot above adjacent grade	<u>9</u>	b) No. of permanent flood openings in the attached garage walls within 1.0 foot above adjacent grade <u>4</u>
c) Total net area of flood openings in A8.b	<u>315</u> sq in	c) Total net area of flood openings in A9.b <u>140</u> sq in

Crawlspace: short 743 sq.in/ft in flood venting protection

Garage: short 355 sq.in/ft in flood venting protection





**Per The Elevation
Certificate this Gable
Air Vent only provided
35 sq.in of net open
area**

Dry Guys.com

WATERPROOFING

ALL THINGS BASE

Waterproofing • Structural P

- Bowing Walls
- Cracks & Settling
- Sagging Floors



Control & Crawlspace Tool!

866.769.9533



Dry Guys Basement Systems

Since 1986
Responsible Waterproofing

c# 13VH05409200
DOT 1135322
GVW 9,900



Cutting Out The Wrong Product For the Job.









After removing the gable vents we discovered they were clogged with debris on the inside. Not noticeable on the outside due to the louvers.

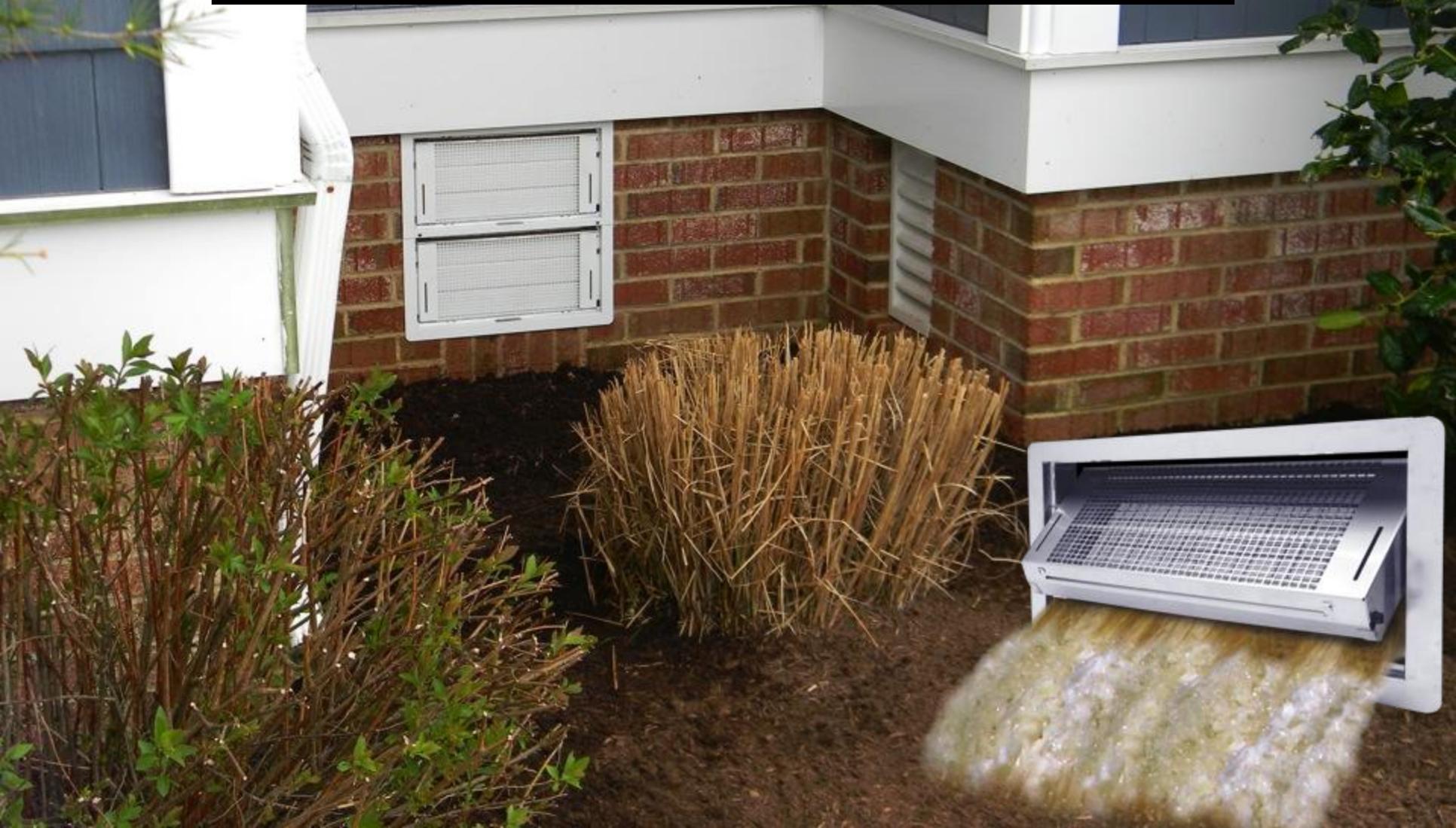
Installing The Right Product For The Job







Retrofitted Three 1540-511 (16"x16") Dual Function Flood Vents Into the Crawlspace. Two 1540-521 (16"x16") Insulated Flood Vents Into the Garage. Each vent is ICC-ES Certified to cover 400 sq.ft of enclosed area.





Dry Guys
 Woodstown, NJ
 856-769-9533
 www.dryguys.com



A8. For a building with a crawl space or enclosure(s), provide

a) Square footage of crawl space or enclosure(s)	<u>1,058</u>	sq ft
b) No. of permanent flood openings in the crawl space or enclosure(s) walls within 1.0 foot above adjacent grade	<u>9</u>	
c) Total net area of flood openings in A8.b	315	sq in

A9. For a building with an attached garage, provide:

a) Square footage of attached garage	<u>495</u>	sq ft
b) No. of permanent flood openings in the attached garage walls within 1.0 foot above adjacent grade	<u>4</u>	
c) Total net area of flood openings in A9.b	140	sq in

1200 sq.ft of protection

800 sq.ft of protection

With the proper flood vents installed the Elevation Certificate will be changed to reflect the correct flood venting protection for the crawlspace and garage.

83% Savings





Flood Insurance Retrofit Installation Certificate

The Smart Vent Products, Inc. line of ICC-ES Certified Engineered Flood Vents meet the Federal Emergency Management Agency's National Flood Insurance Program regulations (44 CFR 60.3(c)(5)) and FEMA TB-1, ASCE 24, and all ICC Building codes, provided it is installed according to those references, as summarized below. Flood openings are required in enclosures below the Base Flood Elevation, attached and detached garages, and accessory structures that meet the required limitations.

I do hereby certify that the SMART VENT® Foundation Flood Vents were installed in accordance with ICC ESR-2074, the manufacturer's instructions and the Installation Limitations and Instructions below:

1. Enclosed areas below otherwise elevated buildings, non-elevated attached and detached garages, and certain non-elevated accessory structures located in flood hazard areas are to be used solely for parking of vehicles, building access or low value storage.
2. Each enclosed area shall have at least 2 flood openings, installed on different sides of the enclosed area.
3. The bottom of the flood opening shall be no more than one foot above the adjacent finished grade level. Installation must comply with manufacturer's instructions.
4. Attach this certificate to a copy of the Smart Vent ICC-ESR 2074 Certification.

<u>INSTALLER INFORMATION</u>		
_____ Company Address		
_____ Company Name	_____ Contact Name	_____ Contact Phone #
_____ Contact Email	_____ Contractor License Number	

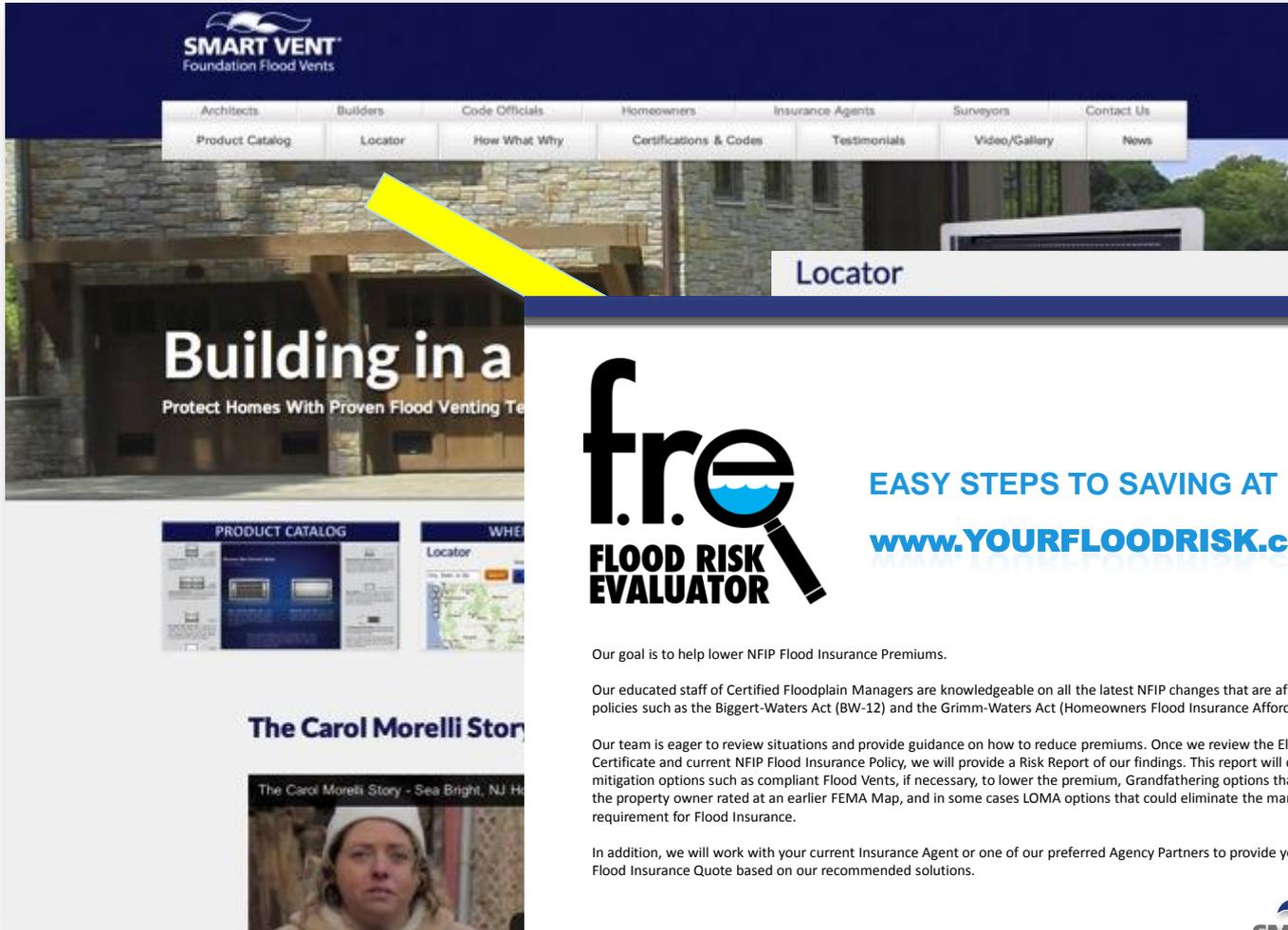
<u>SMART VENT® INSTALLATION INFORMATION</u>				
_____ # of vents	_____ Model #	_____ Date Installed	_____ Area of Installation	_____ Total sq. ft. of protection

<u>SMART VENT® INSTALLATION INFORMATION</u>				
_____ # of vents	_____ Model #	_____ Date Installed	_____ Area of Installation	_____ Total sq. ft. of protection

<u>HOMEOWNER INFORMATION</u>		
_____ Property Address		
_____ Homeowner Name	_____ Homeowner Phone Number	



Resources Here to Help You



f.re
FLOOD RISK EVALUATOR

EASY STEPS TO SAVING AT
www.YOURFLOODRISK.com

Our goal is to help lower NFIP Flood Insurance Premiums.

Our educated staff of Certified Floodplain Managers are knowledgeable on all the latest NFIP changes that are affecting policies such as the Biggert-Waters Act (BW-12) and the Grimm-Waters Act (Homeowners Flood Insurance Affordability Act).

Our team is eager to review situations and provide guidance on how to reduce premiums. Once we review the Elevation Certificate and current NFIP Flood Insurance Policy, we will provide a Risk Report of our findings. This report will detail out mitigation options such as compliant Flood Vents, if necessary, to lower the premium, Grandfathering options that can have the property owner rated at an earlier FEMA Map, and in some cases LOMA options that could eliminate the mandatory requirement for Flood Insurance.

In addition, we will work with your current Insurance Agent or one of our preferred Agency Partners to provide you with a Flood Insurance Quote based on our recommended solutions.

SMART VENT
Foundation Flood Vents

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www.smartvent.com





Flood Risk Evaluator Powered by Smart Vent Products, Inc.

1 Complete our online form.



2 Attach your elevation certificate with pictures of your home or building.



3 Attach current flood insurance policy declaration page.



What Is the Flood Risk Evaluator?

Here at F.R.E. our goal is to help you to lower your NFIP Flood Insurance Premium. Our educated staff of Certified Floodplain Managers are knowledgeable on all the latest NFIP changes that are affecting your policy such as the Biggert-Waters Act (BW-12) and the Grimm-Waters Act (Homeowners Flood Insurance Affordability Act).

Our team is eager to review your current situation and provide guidance on how to reduce your flood insurance premium. Once we review your Elevation Certificate and current NFIP Flood Insurance Policy we will provide you with a report of our findings. This report will detail out

mitigation options such as Flood Vents to lower your premium, grandfathering options that can have you rated at an earlier FEMA Map, and in some cases LOMA options that could eliminate the mandatory requirement for Flood Insurance.

**Our Customers Experience
An 83% Average Decrease Off Their
Flood Premium**

In addition, we will work with your current Insurance Agent or one of our preferred Agency Partners to provide you with a Flood Insurance Quote based on our recommended solutions.

Get Started Today
visit www.yourfloodrisk.com

Flood Risk Evaluator • 430 Andbro Drive, Unit 1 • Pitman, NJ 08071
877-441-8368 • info@yourfloodrisk.com



E-MAIL TO: EC@SMARTVENT.COM

OWNER'S INFORMATION

Name: _____ Phone: _____
Address: _____
E-Mail: _____ Project: _____



Flood Zone _____ Base Flood Elevation _____

ENCLOSURE/CRAWLSPACE INFORMATION

- 1) Square Footage of Enclosure _____
2) Amount of Permanent Flood Openings within 1 foot above adjacent grade _____
3) Total Net Area of Permanent Flood Openings (Sq Ft) _____

GARAGE INFORMATION

- 1) Square Footage of Garage _____
2) Amount of Permanent Flood Openings within 1 foot above adjacent grade _____
3) Total Net Area of Permanent Flood Openings (Sq Ft) _____

ELEVATOR INFORMATION

- 1) Are There Elevators that Travel Below the BFE? Yes No
2) Are The Elevators Wet or Dry Floodproofed? Wet Dry

*If Dry, Supply Dry Floodproofing Certificate
If Wet, Show Details on Plan.*

BUILDING ELEVATION INFORMATION

- 1) Bottom of the Lowest Enclosed Area _____
2) Top of the Next Higher Floor _____
3) Lowest Elevation of Garage Area _____
4) Lowest Level of Machinery (Including Heating, AC, Plumbing, Electrical) _____
5) Lowest Outside Ground Level Adjacent to Enclosed Area (LAG) _____

YOUR INFORMATION

NAME: _____ E-MAIL: _____ QUESTIONS?
COMPANY: _____ PHONE: _____ CALL (877) 441-8368



Summary: Flood Vent Code

- Minimum of two openings on different walls
- Bottom of opening no more than one foot above adjacent grade
- Openings must be 3" in diameter or larger
- Must automatically allow water in and out, without human intervention.



Questions